

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 99-082
NPDES NO. CA0030155

WASTE DISCHARGE REQUIREMENTS FOR:

HELITEK COMPANY
HAYWARD
ALAMEDA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region, (hereinafter called the Board), finds that:

1. Helitek Company, Ltd. (hereinafter called the discharger), by application (Report of Waste Discharge) dated December 14, 1998, has applied for issuance of National Pollutant Discharge Elimination System (NPDES) permit.
2. The discharger processes silicon wafers used in the electronics and computer industries. De-ionized water is required in the manufacturing processes. The raw water is supplied by the City of Hayward which purchases it from the City and County of San Francisco Water Department.
3. The proposed discharge, consisting of brine (or reject water) from a reverse osmosis unit would be released into the Alameda County Flood Control and Water Conservation District (ACFCWCD) Zone 3 Line D through an existing onsite storm drain (lat. 122°03'32"; long. 37°04'39"). Line D is an engineered flood control channel which discharges into the lower San Francisco Bay.
4. The USEPA and the Board have classified this discharge as a minor discharge.
5. The Report of Waste Discharge describes the discharge as follows:

Average flow: 33,120 gallons per day
BOD5: <1.0 mg/l
TOC: 1 mg/l
TDS: 270 mg/l
6. The subject of this Order is limited to the discharge of brine from the reverse osmosis plant. The discharger also discharges the process wastewater other than reverse osmosis reject water and domestic wastewater to the City of Hayward's sanitary sewer collection system.

7. The Board adopted a revised Water Quality Control Plan for the San Francisco Basin (Basin Plan) on June 21, 1995. This updated and consolidated plan represents the Board's master water quality control planning document. The revised Basin Plan was approved by the State Water Resources Control Board (State Board) and the Office Administrative Law on July 20 and November 13, 1995. The Basin Plan identifies beneficial uses and water quality objectives for waters of the State, including surface and ground waters, as well as effluent limitations and discharge prohibitions intended to protect beneficial uses.
8. The beneficial uses of the lower San Francisco Bay are:
 - Industrial Service Supply
 - Navigation
 - Water Contact Recreation
 - Non-contact Water Recreation
 - Ocean Commercial and Sport Fishing
 - Wildlife Habitat
 - Preservation of Rare and Endangered Species
 - Fish Migration
 - Fish Spawning
 - Shellfish Harvesting
 - Estuarine Habitat
9. The Basin Plan contains a prohibition of discharge of any wastewater which has particular constituents of concern to beneficial uses 1) at any point at which the wastewater does not receive a minimum initial dilution of at least 10:1, or 2) into any non-tidal water, dead-end slough, similar confined waters, or immediate tributaries thereof, or 3) to San Francisco Bay south of the Dumbarton Bridge. These three prohibitions do not apply to the proposed discharge because the proposed discharge does not contain particular constituents of concern to beneficial uses, provided the discharge limitations contained in this order are met.
10. This Order serves as an NPDES permit, issuance of which is exempt from the provisions of Chapter 3 (commencing with Section 21100 of Division 13) of the Public Resources Code (CEQA) pursuant to Section 13389 of the Water Code.
11. Effluent limitation guidelines requiring the application of best available technology economically achievable (BAT) for this point source discharge have not been promulgated by the USEPA. Effluent limitations of this Order are based on the Basin Plan, other State plans and policies, current plant performance, and best professional judgment. The limitations are considered to be those attainable by BAT in the judgment of the Board.
12. The Board has notified the discharger and interested agencies and persons of its intent to issue waste discharge requirements, and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

13. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that the discharger, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, and the provisions of the Federal Water Pollution Control Act and regulations and guidelines adopted thereunder, shall comply with the following:

A. Effluent Limitations

1. The discharge of reverse osmosis brine containing constituents in excess of the following limits is prohibited:

<u>Constituent</u>	<u>Units</u>	<u>Monthly Average</u>	<u>Weekly Average</u>	<u>Instantaneous Maximum</u>
Residual Chlorine	mg/l	---	---	0.00

2. The pH of the discharge shall not exceed 8.5 nor be less than 6.5.
3. The discharge shall meet the following acute toxicity limitation:

The survival of test fishes^[1] in 96-hour bioassays of Waste 001 as discharged shall be a three sample^[2] median value of not less than 90 percent survival, and a single sample value of not less than 70 percent survival.

[1] Test fishes as specified by the Executive Officer in the Self-Monitoring Program.

[2] A bioassay test showing survival of less than 90 percent represents a violation of this effluent limit, if one of the past two or less bioassay tests show less than 90 percent survival.

B. Receiving Water Limitations

1. The discharge of wastes shall not cause the following conditions to exist in waters of the State at any place:
 - a. Floating, suspended, or deposited macroscopic particulate matter or foam;
 - b. Bottom deposits or aquatic growths;
 - c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;
 - d. Visible, floating, suspended, or deposited oil or other products of petroleum origin;

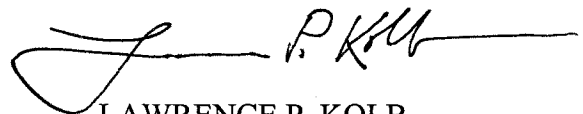
- e. Toxic or deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.
2. The discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Board or the State Board as required by the Federal Water Pollution Control Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 or the Federal Water Pollution Control Act or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

C. Provisions

1. The discharger shall conduct monitoring in accordance with the attached Self-Monitoring Program as adopted by the Board. The Self-Monitoring Program may be amended by the Executive Officer pursuant to USEPA regulations 40 CFR 122.62, 122.63, and 124.5.
2. Pursuant to USEPA regulations 40 CFR 122.44, 122.62, and 124.5, this permit may be modified prior to the expiration date to include effluent limitations for toxic constituents determined to be present in significant amounts in the discharge through a monitoring program included as part of this Order.
3. Compliance with Acute Toxicity Effluent Limitation
 - a. Compliance with Effluent Limitation A.3 (Acute Toxicity) of this Order shall be evaluated by measuring survival of test fishes exposed to undiluted effluent for 96 hours in static renewal bioassays. Two fish species shall be tested concurrently. Each fish species represents a single bioassay.
 - b. The two compliance species shall be as specified in the Table 1 of the Self-Monitoring Program. The discharger shall conduct a minimum of one screening of three species: three-spine stickleback, rainbow trout and fathead minnow. All tests in a single screening must be completed within ten days of each other. The three species screening requirement can be met using either flow-through or static renewal bioassays. The discharger shall submit screening data acceptable to the Executive Officer, within 3 months after adoption of this Order.
 - c. The Executive Officer may consider allowing compliance monitoring with only one fish species (the most sensitive of two) if the discharger can document that the acute toxicity limitation, specified above, has not been exceeded during the previous three years, or that acute toxicity has been observed in only one of two fish species.

- d. All bioassays shall be performed according to protocols approved by the USEPA or State Board, or published by the American Society for Testing and Materials (ASTM) or American Public Health Association.
4. All applications, reports, or information submitted to the Board shall be signed and certified pursuant to USEPA regulations 40 CFR 122.41(k).
5. This Order includes all items of the attached "Standard Provisions, Reporting Requirements" dated August 1993, except Sections B and C.
6. This Order expires on October 20, 2004. The discharger must file a Report of Waste Discharge in accordance with Title 23 of the California Code of Regulations, not later than 180 days in advance of such date as application for reissuance of new waste discharge requirements.
7. This Order shall serve as National Pollutant Discharge Elimination System permit pursuant to Section 402 of the Federal Water Pollution Control Act, or amendments thereto, and shall become effective on the date of adoption provided the Regional Administrator, Environmental Protection Agency, has no objection. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.
8. The discharger shall comply with all sections of this Order immediately upon adoption.

I, Lawrence P. Kolb, Assistant Executive Officer do hereby certify the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region on October 20, 1999.

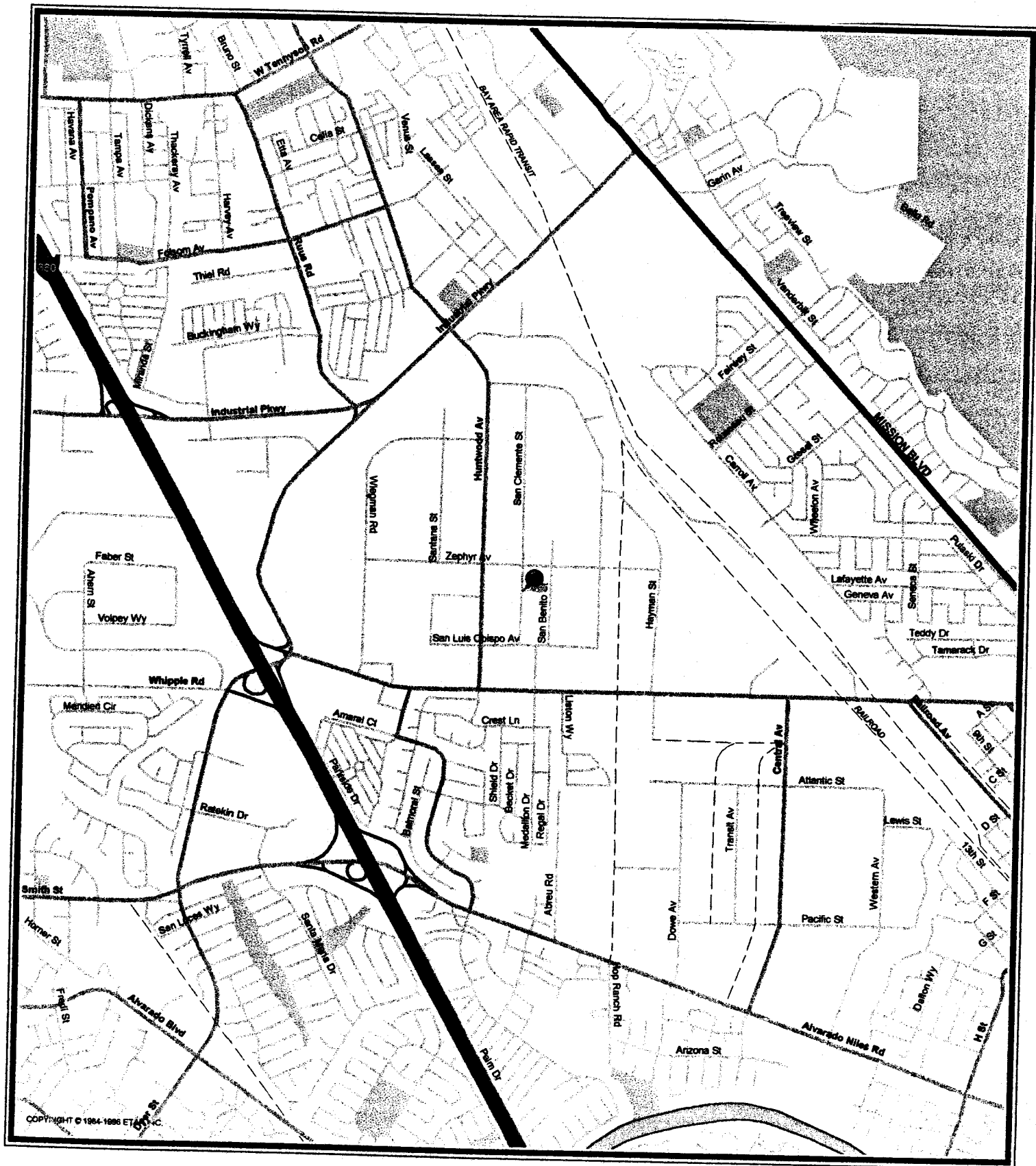


LAWRENCE P. KOLB
Assistant Executive Officer

Attachments:

Area Map
Standard Provisions & Reporting Requirements, August 1993
Self-Monitoring Program

Location of: Helitek Company, LTD
31088 SAN CLEMENTE ST in HAYWARD, CA =



CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

FOR

HELITEK COMPANY LIMITED
HAYWARD
ALAMEDA COUNTY

NPDES NO. CA0030155
ORDER NO. 99-082

CONSISTS OF

PART A dated 8/93, and

PART B Adopted: October 20, 1999

PART B

I. DESCRIPTION OF SAMPLING STATIONS

A. EFFLUENT

<u>Station</u>	<u>Description</u>
E-001	At any point in the outfall between the point of discharge and the point at which all wastes tributary to the discharge are present, prior to mixing of this discharge with other wastewater discharges not permitted by this Order.

B. INFLUENT WATERS

<u>Station</u>	<u>Description</u>
I-001	Located at any point in the pipe which delivers raw water to the discharger's reverse osmosis plant, prior to any point of use. If more than one pipe is involved in supplying raw water, the influent sample shall consist of a flow proportioned composite from each of the sources.

II. SCHEDULE OF SAMPLING AND ANALYSIS

- A. The schedule of sampling and analysis shall be that given in Table 1 (attached).
- B. Sample collection, storage, and analyses shall be performed according to requirements in the latest 40 CFR 136, in the Permit, or as specified by the Executive Officer.


III. MODIFICATIONS TO PART A

- A. Exclude paragraphs C.3, C.4, C.5, E.3, E.4, E.5, and F.3.
- B. The Self-Monitoring Report required by paragraph F.4 shall be submitted on a quarterly basis, by the 15th day following the end of each calendar, on January 15, April 15, July 15, and October 15.

I, Loretta K. Barsamian, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

- 1. Has been developed in accordance with the procedure set forth in this Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Order No. 99-082.

2. Is effective on October 20, 1999.
3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the discharger and revisions will be ordered by the Executive Officer, pursuant to 40 CFR 122.62 and 124.4.



LAWRENCE P. KOLB
Assistant Executive Officer

Attachments:

Table 1 - Schedule of Sampling, Measurement and Analysis

TABLE 1

SCHEDULE OF SAMPLING, MEASUREMENTS, AND ANALYSIS

SAMPLING STATION	E-001		I-001
Type of Sample	Comp	G	Comp
Flow Rate (gallons per day)	daily		daily ^{1/}
pH (standard units)		daily	
Total Suspended Solids		monthly	
Residual Chlorine (mg/l)		daily	
Temperature (degrees C or F)		daily	
Total Dissolved Solids (mg/l)		monthly ^{3/}	
Acute Toxicity, 96-hr Static Renewal Bioassay <u>2/</u>	quarterly ^{2/}		
Standard Observations		weekly	

LEGEND FOR TABLE

Comp = 24-hr composite sample

G = Grab sample

Cont = Continuous Monitoring

Notes for Table:

1. Influent station sampling should be collected coincident with effluent sampling.
2. Rainbow trout and three-spine stickleback shall be used to determine compliance with Effluent limitation A.3. The tests shall be 96-hour static renewal bioassays. The discharger shall perform the tests according to protocols approved by the USEPA, State Board, published by the American society for Testing and Materials (ASTM), or American Public Health Association.
3. The composite samples for Total Dissolved Solids (TDS) and Acute Toxicity shall be analyzed by a certified laboratory in accordance with Standard Methods for the Examination of Water and Wastewater (latest edition).

